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DEVELOPING A KNOWLEDGE MANAGEMENT STRATEGY: REFLECTIONS FROM AN ACTION RESEARCH PROJECT

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Abstract

This paper presents the results of an action research project into the practice of formulating a knowledge management strategy for a middle-sized supply chain solution provider in Australia. The paper contrasts our practice of formulating the strategy with expectations and understandings of strategy and knowledge management strategy critical success factors identified from the literature. We have adopted an action research approach incorporating multiple iterative phases. With the cooperation of the company, this approach has enabled a change in organisational culture to one which now fosters a knowledge sharing environment.

Keywords: Knowledge Management, Strategy, Action Research, Supply Chain Management

1 INTRODUCTION

Knowledge Management (KM) is often referred to as “a conscious strategy of getting the right knowledge to the right people at the right time; it is also helping people share and put information into action in ways that strive to improve organisational performance” (O'Dell et al. 2000, p.154). The importance of KM for large, small and medium organisations has been well recognised. A number of perspectives of KM are advanced in the literature. These include the philosophical, cognitive, network and community perspectives (Kakabadse et al, 2003). The variety of perspectives influences the types of KM strategies that exist and have been categorised as being of three types: (1) focused (2) balanced and (3) dynamic (Choi & Lee, 2002). The predominant KM perspective and/or focus might have significant implications on organisational endeavours to put in place a strategy to manage knowledge.

Furthermore, there are also several approaches to developing strategy within organisations, either at the corporate level, or the operational level. Strategy development could be an entirely social process where stakeholders negotiate an intent and outcome. It could also be a power game where actors draw from the structure of legitimisation to influence theirs' or others' behaviour. Developing strategy could also be a formal, rational and organisational value maximising process (Mintzberg, 1998). How one views and develops strategy is likely to influence its content, process, and outcome.

This article is based on an action research study on a knowledge management strategy developed for a mid-sized supply chain solution provider in Australia, henceforth known as CPM. The action was to develop a KM strategy as ratified in the firm's business plan for 2006-2008. Our research was designed to address two questions. First, how can CPM formulate and implement a KM strategy to achieve better knowledge sharing? Second, how can those involved in projects identify the critical success factors of developing KM strategies to achieve effective results for the organisation? The objective was to solve a specific strategy formulation problem in CPM in collaboration with its management and staff. In so doing, we wanted to test the CSFs identified in existing literature and contribute to knowledge about issues and challenges of using CSFs in practice.

The research draws upon two streams of literature: strategy and KM. The field of strategy development is very comprehensive, and there is a lot of literature on how to solve a strategic problem and many approaches have been developed (Doherty et al, 1999; Mintzberg, 1998). Second, we draw upon the literature on the KM, and in particular, critical success factors (CSFs) for knowledge management. CSFs have been defined by Rockart (1979, p.85) as “the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation.” A review of the KM and KM strategy literature indicates that while there are numerous studies investigating CSFs for KM initiatives in general, there are fewer studies which provide guidance on how to practice them. These two streams provided us with the analytical framework to reflect upon our experience. The authors have used this opportunity to reflect on what has been learned through the process of formulating the KM strategy in the action research project and to extend existing theories which identify CSFs for KM and KM strategy development.

This paper is structured as follows: first we provide a discussion of relevant literature on strategy and KM, including a synthesis of CSFs for KM and KM strategy development. Next, we describe the research methodology. We then reflect on lessons learned from the action research. Finally, we make conclusions from this stage of the research and identify future research outcomes.

2 STRATEGY AND KNOWLEDGE MANAGEMENT

There are many conceptualisations of strategy. Common themes that underlie many of the conceptions are that strategy: (1) charts the orientation of a business; (2) establishes historical patterns; (3) provides a perspective through which an organisation operates; (4) defines the position of an organisation both internally and externally in the market environment; and (5) equips an organisation to successfully manage its business and defend its market position (Mintzberg, 1998).

Strategic planning of KM is an essential capability if organisations desire to maintain a coherent and aligned KM practice, that is, the ability to create closer ties and better understanding between KM and business. Lack of strategic planning has been cited as one of the key detractors of a businesses' pursuit for competitive advantage (Hackney & Little, 1999). Generally, KM strategy practices and the factors that are critical in KM strategy development, can be navigated from three interrelated dimensions – content, context and process, addressing the what, why and how of KM strategy respectively.

In terms of *content*, KM strategic practices can be differentiated on the basis of whether a focused, balanced, or dynamic approach is taken (Choi & Lee, 2002). First, in taking a focused approach, the emphasis is placed on either technology (the system approach) or people (the human-based approach) (Choi & Lee, 2002). Historically, most take a system approach to KM, whereby KM strategy is viewed as a mechanism through which organisations develop key knowledge capture, processing, dissemination and sharing technologies (Davenport et al, 1998; Choi & Lee, 2002). A number of organisations have invested in Information Technology, believing that such investment automatically provides better KM environment and a competitive advantage (Alavi & Leidner, 2001; Choi & Lee, 2002). On the other hand, others see technology as enablers only and adopt a human-based approach which focuses on developing the human resources capabilities of their organisation through an environment that nurtures innovation and learning (Swan et al, 2000; Choi & Lee, 2002). The purpose of KM strategy under such currency is therefore employee empowerment. Second, others advocate for a balanced approach which uses a hybrid of the system and human-based approaches in order to balance the tension between these two extremes (Choi & Lee, 2002). Third, is the dynamic approach, whereby the focus of the KM strategy varies depending upon the characteristics of knowledge (Bloodgood & Sailsbury, 2001; Choi & Lee, 2002). In this study we adopt the balanced approach to the content of the KM strategy. The organisation recognised that technology alone would not create effective KM within the organisation. A change in organisational culture was needed in order to promote knowledge sharing within the organisation.

Practices of KM also vary in terms why organisations pursue a strategic approach to managing their knowledge, that is, the *context*. Generally three motives can be identified: competitiveness,

organisational learning and institutional fitness (mimetic isomorphism). Organisations driven by efficiency motives seek competitive advantage from their strategies and investment (Alavi & Leidner, 2001; King 1995). Organisational learning motives lead to KM practices which enable the business to operate more effectively, without directly producing increases in income (Bollinger & Smith, 2001).

The concept of institutional fitness refers to organisational change processes that make organisations more similar without necessarily making them more efficient (DiMaggio & Powell, 1983). The approach is based on the assumption that uncertainty in a firm's external environment can be a powerful force that encourages imitation. When organisational technologies are poorly understood, when goals are ambiguous or when the environment creates uncertainty organisations may model themselves after other organisations. Although the practice of KM can be traced as far back as the origin of humanity, over the last couple of decades, following the herald of the dawn of the "knowledge society", interest in KM has been significant. A number of organisations have adopted 'a follow the herd approach' in developing KM initiatives often lured by "successful" outcomes in other organisations (Bollinger & Smith, 2001; Drew, 1999).

The *process* of KM strategy can follow either highly formalised methods and tools or more informal stakeholder negotiations and interactions. According to the formal school, strategy formulation "involves an ability to articulate and capture a diverse, fluid and informal set of organisational characteristics which, to date, IS professionals regard as functional, quantifiable, and certain" (Hackney & Little 1999, p. 121). Formal KM strategy templates work at both top management and lower organisational levels to define key KM Performance Indicators (KMPI's) and provide the narratives and discussion about strategic alignment goals, prioritisation, plans, and vision. An example is the balanced scorecard approach (Drew, 1999).

Highly formalised processes of strategy inherently lack attention to "soft" issues such as the power and politics of strategy development. Not all KM strategies are formulated according to a master plan using a formal framework. Sometimes strategies are developed in response to emergent standards from within the organisation or due to the conflux of social and environmental factors surrounding the issues. The strategy continually develops through discussions with key stakeholders, especially at top management level, and is only recorded as a shared understanding. The problem with such an approach is that oftentimes, the shared understanding remains at business executive level; is not sufficiently socialised throughout the hierarchies of the organisation and can lead to misalignment (Faurer & Chahaarbaghi, 2000).

There are also variations in terms of the process of documenting the KM strategy. The formal approach to KM strategy stresses the need for proper documentation of the strategy while in the informal approach such documentation might or might not exist (Bollinger & Smith, 2001; Drew, 1999). The structure of the developed strategy documentation should be conducive to capturing and effectively communicating KM alignment goals, both short and long term. Where documentation of the KM strategy is considered important, there are differences in regards to sharing the document outside top level management (Grillitsch et al, 2007; Hackney & Little 1999). Some argue that as strategy is the business of top executives, other members of the organisation are generally unconcerned with the high level content of the strategy. However, others counter argue that most operational managers and employees are also interested in having the goals and high-level plans of the strategy communicated to them and with them in order to understand the direction of the business and also to anticipate the benefits which might be delivered by KM initiatives (Grillitsch et al, 2007). Overall though, it appears that while the processes of KM strategy formulation are widely understood, the outcomes of it are not.

3 KNOWLEDGE MANAGEMENT

As more organisations begin to implement KM strategies, there is a need to provide systematic guidance to managers, to ensure their success (Wong, 2005). In an attempt to provide such guidance, research has identified critical success factors (CSFs) that should be addressed in KM strategies.

3.1 Critical Success Factors for Knowledge Management

It is useful to first understand the CSFs for a successful KM initiative, as this understanding can then be used when developing a KM strategy. Much research has identified CSFs for KM. Such factors typically address organisational, people, process and technology-based issues.

Organisational-based issues have included alignment of KM with business objectives (Skyrme & Amidon 1997), organisational vision and structure (Skyrme & Amidon 1997; Davenport et al, 1998); a clear purpose and language for KM (Davenport et al, 1998); cultural issues (Skyrme & Amidon 1997; Liebowitz 1999; Holsapple & Joshi, 2000; Akhavan et al, 2006); organisational adjustments (Holsapple & Joshi, 2000); and leadership and top management support (Skyrme & Amidon 1997; Davenport et al. 1998; Liebowitz 1999; Holsapple & Joshi, 2000; Akhavan et al, 2006). The need to link KM to economic performance has also been identified (Davenport et al, 1998). Holsapple and Joshi (2000) on the other hand, argue that factors external to the organisation should also be considered in implementing KM strategies.

Process-based issues include systematic knowledge processes (Skyrme & Amidon 1997) and activities (Holsapple & Joshi, 2000); continuous learning (Skyrme & Amidon 1997; Davenport et al, 1998); and business process re-engineering (Akhavan et al, 2006). Other research has explored the importance of specific knowledge-based processes, such as knowledge creation and knowledge transfer (e.g. Choi & Lee, 2002; Akhavan et al, 2006). The need for governance and administration of knowledge, and for an evaluation process of KM activities and/or resources is also important (Holsapple & Joshi, 2000).

Technology-based issues include the need for a well-developed IT infrastructure (Skyrme & Amidon 1997); and KM systems and tools (Liebowitz 1999; Holsapple & Joshi, 2000).

People-based issues include the need to change motivational practices (Davenport et al, 1998; Holsapple & Joshi, 2000), including incentives for knowledge sharing (Liebowitz 1999); and the need to exploit networks of experts (Akhavan et al, 2006). Researchers have also suggested specific knowledge roles within organisations are required, such as Chief Knowledge Officers (Liebowitz 1999), as are training programs for employees (Akhavan et al, 2006).

In addition to organisational, people, process and technology-based issues, various knowledge-specific issues have been discussed in academic literature. For example, Liebowitz (1999) identifies the importance of knowledge ontologies and repositories. While Akhavan et al, (2006) discuss the importance of knowledge storage, audit and architecture.

Importantly, researchers have specifically identified that having a KM strategy is critical for a successful KM initiative (e.g. Akhavan et al, 2006). However, while there are numerous studies investigating CSFs for KM initiatives in general, there are fewer studies which identify CSFs specifically for *KM strategy* development. Choi and Lee (2002) argue that while identifying knowledge enablers is important, it is still unclear how they should be employed in a strategic way. Consequently, KM strategies are required to facilitate knowledge enablers and to determine how knowledge resources and capabilities should be utilised (Choi & Lee, 2002). Table 1 synthesises CSFs for KM strategy development.

As can be seen from Table 1, Skyrme and Amidon (1997), identify a number of issues which should be addressed when contemplating a new KM initiative. These include: consideration of the organisation's strategy/vision; consideration of business performance and how effective KM can improve this; adopting knowledge-based metrics to influence manager and individual behaviour; using champions to support the KM initiative; ensuring the organisation has a clear understanding of its core business processes and existing knowledge-based initiatives.

Authors	CSFs for KM Strategy Development
Skyrme & Amidon (1997)	Consideration of organisational strategy/vision; Consideration of business performance and how effective KM can improve this; Adoption of knowledge-based metrics to influence behaviour ;Use of champions to support the KM initiative; Ensure there is a clear understanding of core business processes; Ensure there is a clear understanding of existing knowledge-based initiatives.
Hofer-Alfeis & van der Spek (2002)	Convincing the business owner; Correct KSP Workshop composition; Inclusion of most important knowledge-related management activities; Clarify differences and similarities between knowledge strategy and KM roadmap; Professional process consulting and documentation is required.
Wong & Aspinwall (2005); Wong (2005)	Management leadership and support; Culture; Strategy and purpose; Resources; Processes and activities; Training and education; Human resource management; Information technology; Motivational aids; Organisational infrastructure; Measurement
Jafari et al (2007)	Team working and KM features; Leadership and commitment of CEO; Appropriate organisational infrastructure; Pilot, Benchmarking and KM systems; Job enrichment and security; Culture, change management and strategy; Collaborative and flexible organisation; Training and learning.

Table 1. CSFs for Knowledge Management Strategy Development

Another contribution to understanding KM strategy development is provided by Hofer-Alfeis and van der Spek (2002). They detail their experience at Siemens, where the “Knowledge Strategy Process” (KSP), was adopted to develop a knowledge-based strategy and action plan. The KSP is a six step process designed to guide people to define the relationship between business development, key business indicators and knowledge areas. Targets for the knowledge areas are also set and an action plan is drafted and implemented (Hofer-Alfeis & van der Spek, 2002). Lessons learned through applying the KSP include: the method should be used as an iterative process; communication is essential to success and thus inclusion of all relevant stakeholders is essential; it should be integrated into the strategic management cycle; and the use of key performance indicators (KPIs) is crucial. Specific CSFs identified from the lessons learned include: convincing the business owner; the KSP Workshop should be correctly composed; the most important knowledge-related management activities must be included; the differences and similarities between knowledge strategy and a “KM roadmap” must be clarified; and professional process consulting and documentation is required.

Having synthesised CSFs for KM initiatives and developing KM strategies in extant literature, we now describe the research approach before reflecting on the CSFs identified in our action research project.

4 RESEARCH APPROACH

The current project emerged as part of CPM’s business plan 2006-2008 to enhance organisational capability and development for effective KM. CPM’s CIO was entrusted with the responsibility of developing and implementing a KM strategy. The project comprises two phases: Phase One included the development of a strategy before the end of the 2006/2007 financial year (June 2007); Phase Two included the implementation of the strategy and this was due by the end of the 2007-2008 financial year (June 2008). The CIO approached the research team seeking assistance with phase one of the project – developing the strategy. When the opportunity emerged, the research team decided to adopt action research for two reasons. First, we wanted to solve a practical problem and reflect on the process of problem solving to generate knowledge (Rapoport, 1970). Second, we concurred that the use of action research methods can make strategies “more spontaneous than specific, and more contingent than calculative, in other words, strategies can emerge or form in action” (Ballantyne, 2003, p. 331).

One of the most widely cited definitions of action research is that of Rapoport (1970, p. 499), who states “action research aims to contribute both to the practical concerns of people in an immediate

problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework.” Action research is “ideally suited to gaining an understanding of whether technology or methodology is perceived useful and helpful in practice, what problems and issues are perceived to arise, and to identify how practice can be improved within the value system of the problem owner” (Avison, 1993 cited in McKay & Marshall, 2001, p. 48). There are various forms of action research and the one that is particularly suitable for information systems research tradition and applied in our project is collaborative practice research (CPR) (Mathiassen, 2002).

CPR is an approach that aims to understand, provide support, and improve practice by collaboratively working with the stakeholders of the participating organisation. A mutual dependence exists between the researcher and problem owner in that both are reliant on the other’s skill, experiences, and competencies in order for the research process to achieve its dual aim of practical problem solving and the generation of new knowledge and understanding (McKay & Marshall, 2001). In particular, the researchers bring an intellectual framework and knowledge of process to the research context, whereas the problem owner brings knowledge of the context (McKay & Marshall, 2001).

However, as action research is carried out in real-world circumstances, the researchers must pay close attention to ethical considerations in the conduct of their work. Winter (1996) lists a number of principles to consider:

- Make sure that the relevant persons, committees and authorities have been consulted, and that the principles guiding the work are accepted in advance by all.
- All participants must be allowed to influence the work, and the wishes of those who do not wish to participate must be respected.
- The development of the work must remain visible and open to suggestions from others.
- The researcher must accept responsibility for maintaining confidentiality.

These considerations have been followed in the current and ongoing study.

4.1 The Action Cycles

Action research normally consists of two cycles – the problem solving and the research (McKay & Marshall, 2001). The first cycle relates to the researcher’s problem solving (not to be confused with the decision-making process that is being studied), interests and responsibilities (Figure 1), whereas the second cycle refers to the researcher’s research interests and responsibilities (Figure 2) (McKay & Marshall, 2001).

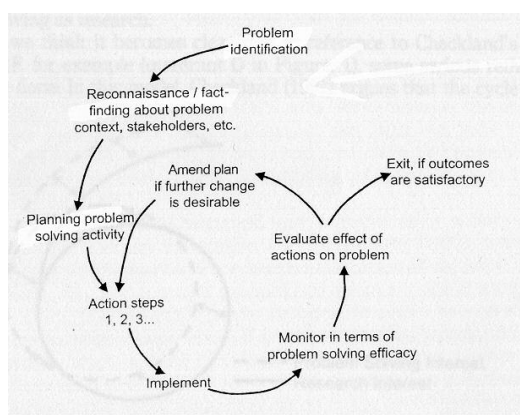


Figure 1: The problem solving interest in action research

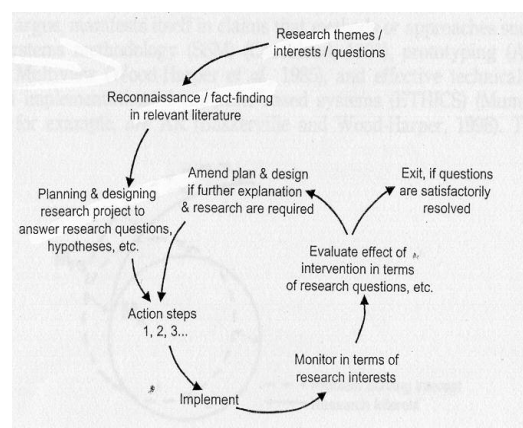


Figure 2 : The research interest in action research

In reality, thinking and acting would rarely follow the neat linear sequence implied by Figures 1 and 2. These cycles are not conducted independently of one another, but are highly interlinked. One cycle is overlaid on the other and operates in tandem with the other.

4.2 Research Process

The current research process was conducted on the basis of CPR action research guidelines with initiating, iterative intervention, and reflective learning as core activities (Avison et al, 1999). Table 1 summarises the process followed in this study.

Core activities	McKay and Marshall 2001: dual cycle	Our approach
Initiating	Identify: problem and research theme Reconnaissance: problem context and literature Plan and design: problem solving and research project	Appreciate problem situation Study, strategy, knowledge management and CSF literature Select strategy approach and develop research framework
Iterating	Action steps Implement Monitor: problem solving and research Evaluate vis-à-vis problem solution and research interest Amend based on 7	Formulate strategy Socialize strategy Evaluate experience
Learning	Exit when problem and research questions are satisfactorily resolved	Exit Elicit research results

Table 2. Action research process

In order to ensure the rigor of the research and avoid the common pitfalls of action research such as researcher bias, lack of discipline, localised findings and mistaking action research as consulting (Baskerville & Wood Harper, 1996), we adopted Davison et al's (2004) principles for conducting rigorous action research. The criteria, *inter alia*, stipulates that researchers should: identify theirs' and practitioners' *roles* and how this develops over time; *document* the data collection process for both the problem and the research cycles; establish the *usefulness* of the solution developed; apply *theoretical* frameworks to guide the study and relate back results to such theoretical frameworks; and highlight the conditions under which results can be extrapolated or *transferred* to other contexts.

4.3 Case Study Organisation

CPM is a not-for-profit Australian-based organisation responsible for administering numbering standards for Australia-based members to assist in effective supply chain management between trading partners. The company is based primarily in Melbourne, Australia, but also has a branch in Sydney. There are currently 90 employees in the organisation, with fifteen in Sydney and the remainder in Melbourne. Services offered by CPM include member support, business development, professional consulting for implementing systems, barcode and numbering verification, onsite and online education and access to the CPM system of standards for electronic communication and trading.

4.4 Research Practice

The following section will be divided into the carious activities associated with action research, primarily the initiating, iteration and conclusion. We identified three iterations of the research before reaching the conclusion.

4.4.1 Initiating

The KM strategy was initiated via consultation of an external consultant to CPM Australia in early 2006. The over-arching aim of this strategy is to enhance organisational capability through organisational development. Specifically, recommendations were made by the external consultant to foster "effective knowledge management" through the development and implementation of a KM strategy. The responsibility of this strategy lies with the Chief Information Officer (CIO) of CPM. At this time, one of the researchers was employed by CPM, but moved from CPM into academia. Whilst

maintaining contact with CPM, the CIO and researcher discussed the opportunity of developing the KM strategy.

In October 2006, two researchers visited the CIO of CPM and the Education Manager to devise an approach to develop the KM strategy for CPM. Subsequent to that meeting, a third researcher was brought into the team.

In initial discussion with CPM, there was a vague understanding of what KM refers to, with the CIO claiming that they were unable to define knowledge, stating that “I do not know, what I do not know.” However, the CIO and Education Manager were able to identify a variety of poor information and KM within the organisation, further prompting the need for a KM strategy within CPM.

4.4.2 First Iteration

In late November and early December twenty-one interviews were conducted of approximately 30 minutes in duration, being held both in Melbourne (face-to-face) and Sydney (through audio-conferencing). The interview participants consisted of a variety of CPM employees, as identified by the Education Manager. The interviewees ranged from the Chief Finance Officer (CFO), CIO, general managers and operational staff. Thus a good range of perspectives across the organisation was obtained. The types of questions asked probed interviewees to identify KM issues relating to technology and systems, communication, organisational knowledge, key work processes and knowledge flows, learning in CPM, organisational climate and KM at CPM.

Once the interviews were completed, the research team convened back at the University to discuss informal findings and common themes raised during the interviews. These themes could be divided into the following areas: people, processes and technology. A table was constructed placing each relevant comment against the themes, further categorised by efficiency, effectiveness and scalability.

4.4.3 Second Iteration

In December 2006, a focus group was conducted at CPM, consisting of eight employees of CPM. Seven of those involved in the focus group were interviewed as part of the first iteration. However, a new CPM employee was included in this focus group as their name was mentioned by the interviewees as having significant input and control of the IT infrastructure at CPM.

The focus group ran for one hour and was run by one of the researchers with the other two present to prompt further questioning or clarification as required. These two researchers took extensive notes throughout the focus group.

There was general consensus with the findings identified through the interviews in the first iteration of the project. However, clarification on some of the findings was required, with several participants surprised with some of the findings of the interviews.

The focus group provided a forum for clarification and elaboration of the issues discussed during the original interviews. This resulted in an agreed-upon vision of the KM strategy developed by focus group participants. Changes were made to the findings identified in the first iteration based on the outcomes of the focus group, and sent to the CIO and Education Manager in early January, 2007.

4.4.4 Third Iteration

With consensus reached on the findings, the research team started developing the actual strategy. This process spanned from early February 2007 until May 2007, with the addition of a new member in February 2007. The CIO and Education Manager at CPM wanted to release the KM strategy to the participants in the focus group, for review.

Feedback was received from this review process by the research team in early July 2007. The majority of feedback was positive in respect to the strategy and its outcomes. There were some comments that suggested further clarification of the KM strategy document was required. One comment provided by a participant who was not available for the initial interviews, questioned the use of an external group

of the researchers for developing the strategy. This participant suggested that there should be an internal reference group to ratify and validate the strategy, and to manage its implementation, before the strategy document was socialised across the organisation. The research team took these comments in their stride and made the necessary changes as highlighted by the comments for clarification from the feedback received. The final implementation process for the KM strategy document was made by the CIO at CPM.

Simultaneously, the CIO and Education Manager believed it would be beneficial to conduct presentations at CPM, outlining what KM is, and putting it into the context of what KM means for CPM. These presentations were conducted on in August 2007, in two one-hour sessions. Of the 90 employees within CPM, approximately 35 employees of the Melbourne office and 15 employees of the Sydney office (through audio-conferencing), attended the sessions. Response was positive from attendees, indicating that they could see the relevance of such a KM strategy for CPM. The CIO and Education Manager believed this was a positive step in creating a knowledge sharing culture within the organisation.

4.4.5 Learning

The research team then spent the subsequent month making the last of the changes identified during the presentations conducted in August. In September 2007, the research team finalised the KM strategy and formally submitted it to CPM. CPM are now in the process of creating a small team of members to implement various aspects of the KM strategy.

5 REFLECTIONS FROM THE ACTION RESEARCH PROJECT

5.1 Lesson 1: Conceptualising knowledge management – what it means and what it is not

In developing the KM strategy, we found that it was important to educate members of the organisations about the benefits of KM. Of particular importance was the need to ensure members of the organisation understood the implications of the KM strategy to them as individuals and them performing as members of wider teams. This was achieved through both the methodology employed during the research project as well as the content of the strategy document.

With respect to the methodology, we utilised a number of approaches. First, the individual interviews and focus group were used as a forum to explain to participants the objectives of KM and thus why the organisation was pursuing a KM strategy. Further, when finalising the KM strategy document, all staff members within the organisation were invited to a presentation explaining the KM strategy. Notably, the CIO was particularly keen to ensure the project team communicated to staff during this session, that no jobs would be threatened by adopting the KM strategy, but rather, it would help staff members in performing their roles more effectively.

With respect to the content, the strategy developed for CPM encompassed a number of features to ensure members of the organisation were able to conceptualise KM and the objectives of the KM strategy. The KM strategy:

- Establishes the background and scope for the KM strategy;
- Includes an explanation of KM and its objectives;
- Describes the key drivers of KM for the organisation;
- Establishes the current state of KM in the organisation (including a knowledge, process and technology audit);
- Outlines how the organisation can move towards the “where it wants to be” by setting specific projects and targets to be achieved;
- Discusses why KM is the responsibility of every employee as well as identifying individuals and teams who should be responsible for particular projects/targets set out in the strategy;
- Uses simple language with all key terms explained; and

- Uses an easy to follow format.

5.2 Lesson 2: Stakeholder Engagement and Management

Stakeholder engagement and management – the principle of action research, dictates that participants should be drawn from those that are likely to be affected because of decisions arising out of a project. Our experience indicates that despite the best intentions, this is not always a simple matter to achieve. In this KM project, for example, it was not possible to include everyone and only a selected sample of employees and managers have participated. Whether these people were representative of the rest of the employees or not was a moot point. Not all managers were fully committed to the project.

In the second iteration what emerged was a strong resistance from a key stakeholder, who doubted the use of an external team to formulate the strategy. While every effort was made to include this employee in the original interviews, he was unavailable to participate in this process.

5.3 Lesson 3: CSFs for Developing a Knowledge Management Strategy

In this action research project, the research team observed a number of factors critical for ensuring the successful development of a KM strategy.

When comparing our observations to the factors listed in Table 2, a number of consistencies can be identified. First, similar to Skrme and Amidon (1997), we identified that it is important to consider the organisation's strategy/vision when developing a KM strategy. Obtaining and understanding of existing processes, knowledge, and KM initiatives within the organisation was also an important part of developing the KM strategy (Hofer-Alfeis & van der Spek, 2002). This knowledge audit and requirements analysis enabled us to develop a picture of where the organisation is currently with respect to KM, as well as insight as to what the key drivers for KM within the organisation are. We were then able to understand where the organisation would like to be subsequent to the KM strategy implementation. As external consultants, this also demonstrated an understanding of the organisation's requirements (Skrme & Amidon, 1997; Hofer-Alfeis & van der Spek, 2002).

The commonly reported issues of leadership, top management support and culture was confirmed as important in this study (Wong & Aspinwall, 2005; Wong, 2005). In this project the key driver was the CEO of the organisation, who was informed by the external consultant that the organisation required a KM strategy in order to operate more effectively. The CEO of CPM then passed this directive to the CIO of CPM, who, along with the Education Manager, became the project leaders and business owners' of the project.

Stakeholder-based issues were found to be of critical importance in this study as discussed above. With respect to CSFs identified in extant literature, we found strong evidence to support Hofer-Alfeis and van der Spek's (2002) findings surrounding the importance of including the correct participants when developing the strategy. We also advocate the use of champions to support the KM initiative (Skrme & Amidon, 1997; Hofer-Alfeis & van der Spek, 2002), as well for the need to ensure the business owner is convinced of the benefits of the KM initiative (Hofer-Alfeis & van der Spek, 2002). In our study, this task was relatively straight forward, given the need for a KM strategy was identified by external consultants in the organisation's business plan and consequently, the business-owner approached us for assistance. Setting specific targets for individuals and teams met was important (Skrme & Amidon, 1997; Hofer-Alfeis & van der Spek's, 2002), as was ensuring that there were visible "quick-wins" resulting from the strategy.

Notably, while a pilot implementation of the KM strategy developed in this project was not used, there were indications in this project that such an approach might be useful. It was suggested by some of the key stakeholders within the organisation and later adopted by the CIO and Education Manager that a small team within CPM would take responsibility for this project. The notion was that this small team would implement small sections of this strategy in a pilot-phased approach with smaller departments

within the organisation in order to make employees feel comfortable with the changes, rather than adopt a plunge approach and increase potential resistance for change.

6. DISCUSSION AND CONCLUSION

This research set out to explore the development process of a KM strategy for a medium-sized Australian organisation. The literature identified a variety of CSFs associated with strategy development and specifically, KM. The authors have attempted to synthesise the literature in the development of the KM strategy for CPM. An action research approach was taken in order to identify the various phases involved in the KM strategy development process.

To date, this study has been able to confirm a number of the factors are critical for successful KM initiatives discussed earlier. Amongst these are the need for a strong link to business imperative (Skyrme & Amidon, 1998); a supportive culture (Skyrme & Amidon, 1998; Liebowitz, 1999; Holsapple & Joshi, 2000; Akhavan et al, 2006); and leadership and senior management support (Davenport et al, 1998; Akhavan et al, 2006). The relevant findings have included: ensuring members of the organisation understood the implications of the KM strategy; a general representation of the organisation should be identified in the requirements elicitation process, but this list should then be limited to the participants that are likely to be affected because of decisions arising out of a project; as well as having the necessary leadership and support as has been identified in the CSF literature.

The authors will be continuing this research into the future with the co-operation of CPM as they start implementing various aspects of the KM strategy. It is envisaged that at the conclusion of this project, it will be possible provide a post-implementation assessment of the success of the KM initiative. At this time it will be appropriate to further reflect on the CSFs for mature KM initiatives identified in extant literature, with the CSFs deemed critical in this research project.

7. REFERENCES

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